

Doc 9946  
AN/481



# **Manual on Regional Accident and Incident Investigation Organization**

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**Approved by the Secretary General  
and published under his authority**

**First Edition — 2011**

**International Civil Aviation Organization**



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## **AMENDMENTS**

Amendments are announced in the supplements to the *Catalogue of ICAO Publications*; the Catalogue and its supplements are available on the ICAO website at [www.icao.int](http://www.icao.int). The space below is provided to keep a record of such amendments.

## **RECORD OF AMENDMENTS AND CORRIGENDA**



## FOREWORD

This manual provides guidance on the establishment and management of a regional accident and incident investigation organization (RAIO) and outlines the duties and responsibilities of ICAO Contracting States, individually and/or collectively, with respect to the establishment and management of a regional accident and incident investigation system. It is addressed to high-level government decision makers, as it highlights States' obligations as signatories to the *Convention on International Civil Aviation* (Chicago Convention) signed in Chicago on 7 December 1944, and provides information and guidance on the establishment and management of an RAIO to assist Contracting States in fulfilling part or all of their obligations pertaining to accident and incident investigation.

*Note.— Because this manual deals with both accident and incident investigations, for reasons of brevity, the terms "accidents" and "accident investigation", as used herein, apply equally to "incidents" and "incident investigation".*

At the Accident Investigation and Prevention (AIG) Divisional Meeting (2008) (AIG/08) held in Montréal from 13 to 18 October 2008, Recommendations 6/1, 6/2, 6/3 and 6/4 were adopted on the subject of regional cooperation in accident and incident investigations. Recommendation 6/2 specifically urged ICAO to develop guidance material for States on how to establish and manage a regional accident and incident investigation system. Accordingly, this manual has been developed in response to that recommendation.

In accordance with the Convention, a State has complete and exclusive sovereignty over the airspace above its territory. Nevertheless, on adhering to the Convention, States agree to certain principles and arrangements in order that international civil aviation may be developed in a safe and orderly manner.

The safe and orderly development of international civil aviation requires that all civil aviation operations be conducted under internationally accepted minimum operating standards, procedures and practices. That States must collaborate to the highest degree to achieve standardization and harmonization of regulations, rules, standards, procedures and practices is thus a requirement of the Convention (Articles 12 and 37 refer).

Moreover, Article 26 of the Convention specifies that it is incumbent on a State in which an aircraft accident occurs to institute an inquiry into the circumstances of the accident. This obligation can be met only when an appropriate organization is in place for the investigation of aircraft accidents. Annex 13 to the Convention specifies Standards and Recommended Practices (SARPs) for the conduct of aircraft accident and incident investigations on the part of States to meet their obligations under Article 26 of the Convention.

This manual, therefore, presents guidance to States on how to establish and manage a regional accident and incident investigation system within a particular region or subregion, should they wish to fulfil their accident investigation obligations through such a system.

Numerous initiatives designed to help States meet their responsibilities have been undertaken in the past. However, in many regions a number of States have not yet developed the capability for effective accident and incident investigations.

ICAO Universal Safety Oversight Audit Programme (USOAP) audit findings indicate that a number of States have not been able to implement an effective accident and incident investigation system for their aviation activities. The findings have been associated, in general, with a lack of resources (human and financial) and, specifically, with a lack of: appropriate legislation and regulations; an organization for the investigation of accidents and incidents; a training system for investigators; equipment to conduct investigations; and policies, procedures and guidelines for accident and incident investigations.

A regional investigation system can provide economies of scale by allowing for the sharing of required resources. In addition, working together, Contracting States of a region or subregion can have a more persuasive voice on the world stage and can help secure a more favourable climate aimed at a safer international air transportation system.

It is noted that a regional investigation system must be totally impartial and be perceived to be so. It should be established in such a way that it can withstand political or other interference or pressure, which can be achieved by setting up the regional investigation authority as an independent statutory body and separate from the civil aviation administration. It is essential that a regional investigation authority report directly to a Congress, Parliament or a ministerial level of the host State's government.

Although this is the first ICAO manual providing guidance for the establishment and management of regional accident and incident investigation systems, it should be noted that some groups of States have already established an RAIO (e.g. the Interstate Aviation Committee representing Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan; and the Banjul Accord Group Accident Investigation Agency (BAGAIA) consisting of Cape Verde, Gambia, Ghana, Guinea, Liberia, Nigeria and Sierra Leone). Another group of States in Central America is considering similar action. These RAIOs were formed, or are being formed, in part, to take advantage of the economies of scale that such cooperation presents, as well as taking into account the resources located in certain States.

Appendix 1 to this manual contains a Model Agreement that can be used by a group of States to establish and manage an RAIO and which should be adapted to the needs of States as appropriate.

In order to keep this manual relevant and accurate, suggestions for improving it in terms of format, content or presentation are welcome. Any such recommendation or suggestion will be examined and, if found suitable, will be included in the next edition of the manual on the approval of the Secretary General. Regular revision will ensure that the manual remains both pertinent and accurate.

Comments concerning this manual should be addressed to:

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# TABLE OF CONTENTS

|   | <i>Page</i>   |
|---|---------------|
| <b>Glossary .....</b>   | <b>(ix)</b>   |
| <b>List of acronyms.....</b>  | <b>(xii)</b>  |
| <b>ICAO publications .....</b>  | <b>(xiii)</b> |
| <b>Chapter 1. Introduction .....</b>  | <b>1-1</b>    |
| 1.1 Objective of the manual.....  | 1-1           |
| 1.2 About the manual .....  | 1-1           |
| <b>Chapter 2. The need to develop a regional accident and incident investigation organization.....</b>                  | <b>2-1</b>    |
| 2.1 Background .....  | 2-1           |
| 2.2 A strategy for establishing a regional accident and incident investigation organization.....                        | 2-1           |
| 2.3 Strategy: Obligations and prerequisites.....  | 2-2           |
| 2.4 The responsibility of Contracting States and the role of governments.....   | 2-2           |
| <b>Chapter 3. The establishment and management of a regional accident and incident investigation organization .....</b> | <b>3-1</b>    |
| 3.1 General.....  | 3-1           |
| 3.2 Establishment of a regional accident and incident investigation organization .....                                  | 3-1           |
| 3.3 Qualifications of RAIO Officials .....  | 3-2           |
| 3.4 Legal framework .....   | 3-2           |
| 3.5 Independence.....   | 3-4           |
| 3.6 Objectives.....   | 3-6           |
| 3.7 The role of ICAO .....  | 3-7           |
| 3.8 Relationships with other aviation-related organizations.....  | 3-7           |
| 3.9 Duties and responsibilities of a regional accident and incident investigation organization .....                    | 3-8           |
| 3.10 Organizational structure of a regional accident and incident investigation organization .....                      | 3-8           |
| <b>Chapter 4. Financing a regional accident and incident investigation organization .....</b>                           | <b>4-1</b>    |
| 4.1 Benefits from economies of scale.....   | 4-1           |
| 4.2 Sources of financing .....  | 4-1           |
| 4.3 Trust funds .....   | 4-2           |
| 4.4 States' obligations and contributions .....   | 4-2           |
| 4.5 Development of a budget .....   | 4-2           |
| <b>Chapter 5. Implementation of the regional accident and incident investigation organization .....</b>                 | <b>5-1</b>    |
| 5.1 Introduction.....   | 5-1           |
| 5.2 Compliance with SARPs.....  | 5-1           |
| 5.3 Regulations, guidance material, procedures and processes .....  | 5-1           |

---

|  | <i>Page</i> |
|--|-------------|
| 5.4    Reporting and sharing of information.....   | 5-2         |
| 5.5    Processing of safety recommendations.....   | 5-2         |
| <b>Chapter 6. Training programme of the regional accident and incident investigation organization.....</b>   | <b>6-1</b>  |
| 6.1    Training of technical/investigation staff.....  | 6-1         |
| 6.2    Training policy and objective .....   | 6-1         |
| 6.3    Training programme .....  | 6-2         |
| 6.4    Training process.....   | 6-2         |
| 6.5    Individual development programme (IDP) .....  | 6-3         |
| 6.6    Training requirements.....  | 6-3         |
| 6.7    Maintenance of training records .....   | 6-4         |
| 6.8    Training evaluation .....   | 6-4         |
| 6.9    Competence requirements .....   | 6-4         |
| <b>Appendix 1. Model agreement between a group of States for the establishment and management of a regional accident and incident investigation organization (RAIO).....</b> | <b>A1-1</b> |
| <b>Appendix 2. Individual development plan .....</b>   | <b>A2-1</b> |

## GLOSSARY

When the following terms are used in this manual, they have the following meanings:

**Accident.** An occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down, in which:

- a) a person is fatally or seriously injured as a result of:

- being in the aircraft, or
- direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or
- direct exposure to jet blast,

*except* when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or

- b) the aircraft sustains damage or structural failure which:

- adversely affects the structural strength, performance or flight characteristics of the aircraft, and
- would normally require major repair or replacement of the affected component,

*except* for engine failure or damage, when the damage is limited to a single engine, (including its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes), or for minor damages to main rotor blades, tail rotor blades, landing gear, and those resulting from hail or bird strike (including holes in the radome); or

- c) the aircraft is missing or is completely inaccessible.

*Note 1.— For statistical uniformity only, an injury resulting in death within thirty days of the date of the accident is classified, by ICAO, as a fatal injury.*

*Note 2.— An aircraft is considered to be missing when the official search has been terminated and the wreckage has not been located.*

*Note 3.— The type of unmanned aircraft system to be investigated is addressed in 5.1 of Annex 13.*

*Note 4.— Guidance for the determination of aircraft damage can be found in Attachment G to Annex 13.*

**Accredited representative.** A person designated by a State, on the basis of his or her qualifications, for the purpose of participating in an investigation conducted by another State. Where the State has established an accident investigation authority, the designated accredited representative would normally be from that authority.

**Adviser.** A person appointed by a State, on the basis of his or her qualifications, for the purpose of assisting its accredited representative in an investigation.

**Aircraft.** Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

**Audit.** A systematic and objective review of a State's aviation framework to verify compliance with the provisions of the Chicago Convention or national regulation, conformance with or adherence to Standards and Recommended Practices (SARPs), procedures and good aviation safety practices.

**Causes.** Actions, omissions, events, conditions, or a combination thereof, which led to the accident or incident. The identification of causes does not imply the assignment of fault or the determination of administrative, civil or criminal liability.

**Civil aviation authority.** The governmental entity or entities however titled, that are directly responsible for the regulation of all aspects of civil air transport, technical (i.e. air navigation and aviation safety) and economic (i.e. the commercial aspects of air transport).

**Flight recorder.** Any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation.

*Note.— See Annex 6, Parts I, II and III, for specifications relating to flight recorders.*

**General aviation operation.** An aircraft operation other than a commercial air transport operation or an aerial work operation.

**Incident.** An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

*Note.— The types of incidents which are of main interest to the International Civil Aviation Organization for accident prevention studies are listed in Attachment C to Annex 13.*

**Investigation.** A process conducted for the purpose of accident prevention which includes the gathering and analysis of information, the drawing of conclusions, including the determination of causes and/or contributing factors and, when appropriate, the making of safety recommendations.

**Investigator-in-charge.** A person charged, on the basis of his or her qualifications, with the responsibility for the organization, conduct and control of an investigation.

*Note.— Nothing in the above definition is intended to preclude the functions of an investigator-in-charge being assigned to a commission or other body.*

**Maximum mass.** Maximum certificated take-off mass.

**Operator.** A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

**Preliminary Report.** The communication used for the prompt dissemination of data obtained during the early stages of the investigation.

**Safety recommendation.** A proposal of an accident investigation authority based on information derived from an investigation, made with the intention of preventing accidents or incidents and which in no case has the purpose of creating a presumption of blame or liability for an accident or incident. In addition to safety recommendations arising from accident and incident investigations, safety recommendations may result from diverse sources, including safety studies.

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**Serious incident.** An incident involving circumstances indicating that there was a high probability of an accident and associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time it comes to rest at the end of the flight and the primary propulsion system is shut down.

*Note 1.—The difference between an accident and a serious incident lies only in the result.*

*Note 2.—Examples of serious incidents can be found in Attachment C to Annex 13.*

**State of Design.** The State having jurisdiction over the organization responsible for the type design.

**State of Manufacture.** The State having jurisdiction over the organization responsible for the final assembly of the aircraft.

**State of Occurrence.** The State in the territory of which an accident or incident occurs.

**State of the Operator.** The State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.

**State of Registry.** The State on whose register the aircraft is entered.

*Note.—In the case of the registration of aircraft of an international operating agency on other than a national basis, the States constituting the agency are jointly and severally bound to assume the obligations which, under the Chicago Convention, attach to a State of Registry. See, in this regard, the Council Resolution of 14 December 1967 on Nationality and Registration of Aircraft Operated by International Operating Agencies which can be found in Policy and Guidance Material on the Economic Regulation of Inter-national Air Transport (Doc 9587).*

**State safety programme.** An integrated set of regulations and activities aimed at improving safety.

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## **LIST OF ACRONYMS**

|        |   |
|--------|---|
| ADREP  | Accident/Incident Data Reporting System                               |
| AIG/08 | Accident Investigation and Prevention (AIG) Divisional Meeting (2008) |
| ATS    | Air traffic services  |
| CAA    | Civil aviation authority  |
| CEO    | Chief executive officer   |
| COO    | Chief operating officer   |
| GASP   | Global Aviation Safety Plan   |
| GASR   | Global Aviation Safety Roadmap  |
| ICAO   | International Civil Aviation Organization                             |
| IDP    | Individual development plan   |
| IIC    | Investigator-in-charge  |
| MOC    | Memorandum of Cooperation   |
| MOU    | Memorandum of Understanding   |
| RAIO   | Regional Accident and Incident Investigation Organization             |
| SARPs  | Standards and Recommended Practices                                   |
| SDCPS  | Safety data collection and processing systems                         |
| SSP    | State safety programme  |
| TAC    | Training and administrative coordinator                               |
| TCB    | Technical Co-operation Bureau   |
| USOAP  | Universal Safety Oversight Audit Programme                            |

## **ICAO PUBLICATIONS**

*(referred to in this manual)*

The ICAO documents listed below are referred to in this manual and provide additional guidance material for the establishment and management of a regional accident and incident investigation system, as well as the organization, planning, investigation and reporting of accidents and incidents, in accordance with Annex 13.

### **Annexes to the Convention on International Civil Aviation**

*Annex 13 — Aircraft Accident and Incident Investigation*

### **Manuals**

*Airport Services Manual (Doc 9137)*

Part 5 — Removal of Disabled Aircraft

*Human Factors Training Manual (Doc 9683)*

*Manual of Aircraft Accident Investigation (Doc 6920)*, which will eventually be replaced in total by Doc 9756

*Manual of Aircraft Accident and Incident Investigation (Doc 9756)*

Part I — Organization and Planning

Part II — Procedures and Checklists (in preparation)

Part III — Investigation (in preparation)

Part IV — Reporting

*Manual of Civil Aviation Medicine (Doc 8984)*

*Safety Management Manual (SMM) (Doc 9859)*

### **Circulars**

*Guidance on Assistance to Aircraft Accident Victims and their Families (Cir 285)*

*Hazards at Aircraft Accident Sites (Cir 315)*

*Training Guidelines for Aircraft Accident Investigators (Cir 298)*



# **Chapter 1**

## **INTRODUCTION**

### **1.1 OBJECTIVE OF THE MANUAL**

1.1.1 The objective of this manual is to provide guidance to States that wish to form a regional accident and incident investigation organization.

1.1.2 The manual is intended to be responsive to Recommendation 6/2 of AIG/08, which urged ICAO to develop guidance for States on how to establish and manage a regional accident and incident investigation system.

### **1.2 ABOUT THE MANUAL**

1.2.1 This manual describes States' obligations and responsibilities for accident investigation and provides guidance for a group of States to use in developing a regional accident and incident investigation system.

1.2.2 In order to provide comprehensive and meaningful guidance on the establishment and management of a regional accident and incident investigation system, the organizational structure of a generic RAIO is presented in Chapter 3, along with written guidance and explanations. States are encouraged to establish such a self-contained structure capable of meeting their individual responsibilities for accident and incident investigation.

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## **Chapter 2**

# **THE NEED TO DEVELOP A REGIONAL ACCIDENT AND INCIDENT INVESTIGATION ORGANIZATION**

### **2.1 BACKGROUND**

2.1.1 The Chicago Convention and its Annexes allocate responsibility for aviation safety to individual States. Article 26 of the Convention specifically states, in part "... the State in which the accident occurs will institute an inquiry into the circumstances of the accident, in accordance, so far as its laws permit, with the procedure which may be recommended by the International Civil Aviation Organization".

2.1.2 USOAP audits have highlighted that many States do not have the resources necessary to investigate the full range of aircraft accidents and incidents and to carry out thorough analyses of the accident and incident data received. For such States, the establishment of an RAIO, or the creation of a regional pool of qualified investigators, may be the only solutions to achieving the effective implementation of an investigation and prevention system.

2.1.3 For the investigation of major accidents in States which do not have the resources to carry out the investigation, other interested States (e.g. the State of Registry, State of the Operator, State of Design or State of Manufacture) may assist and provide support to the State of Occurrence. However, assistance and support, such as the delegation of the whole or part of the investigation to another State, does not relieve the State of Occurrence from its responsibility to institute an investigation and to complete a Final Report of the investigation. Similarly, many States lack the capability to investigate non-major accidents or incidents, in accordance with Annex 13. For many of those States, the establishment of an RAIO may be the only reasonable option to enable the establishment of an effective accident and incident investigation and prevention system that meets the States' obligations.

### **2.2 A STRATEGY FOR ESTABLISHING A REGIONAL ACCIDENT AND INCIDENT INVESTIGATION ORGANIZATION**

2.2.1 A commitment to the provision of a safe civil aviation system must be made at the highest level of every government and with the involvement of the aviation industry in a State. Agreements implemented among a group of States of a region will contribute to a more cost-effective and efficient allocation of resources to achieve the mutual goals of meeting the requirements of ICAO, particularly Annex 13.

2.2.2 The reasons for adopting a strategy to establish an RAIO would be, among others to:

- a) eliminate duplication of efforts by pooling human, technical and financial resources;
- b) achieve economies of scale leading to effectiveness and efficiency;
- c) demonstrate, as a responsible regional organization, improved regional solidarity;
- d) enable investigators in the region to gain experience more quickly;
- e) facilitate the recruitment and retainment of investigators by States; and
- f) help achieve the independence of investigations.

### **2.3 STRATEGY: OBLIGATIONS AND PREREQUISITES**

2.3.1 It is important for States wishing to establish a regional accident and incident investigation system to formulate a strategy that is well-defined in terms of purpose, objectives, activities, output, result indicators, duration and expected results. The Model Agreement contained in Appendix 1 to this manual provides guidance for States to consider when establishing an RAIO.

2.3.2 A comprehensive analysis of the need for the establishment of an RAIO and the procedures to be followed in its management would lead to the design and implementation of an effective strategy. The strategy should consider a system for monitoring the effectiveness of implementation and management, such as well-defined performance indicators. In general, performance indicators would include consideration of all accidents and incidents investigated and reports issued, in accordance with Annex 13, as well as collection, analyses and sharing of accident and incident data.

2.3.3 Prior to the establishment of a regional accident and incident investigation system, it must be ensured that Member States are committed to fully support the RAIO in all aspects, including the adoption of joint policies and procedures and the allocation of adequate funding for accident and incident investigation.

2.3.4 All Member States of an RAIO must ensure that they have established a State safety programme (SSP) in accordance with the guidance and framework provided in Attachment F to Annex 13, wherein States should, *inter alia*, maintain the independence of the accident and incident investigation organization from other aviation organizations.

### **2.4 THE RESPONSIBILITY OF CONTRACTING STATES AND THE ROLE OF GOVERNMENTS**

#### ***Responsibility of Contracting States***

2.4.1 The majority of the articles of the Chicago Convention establish the rights and obligations of all Contracting States and provide for the adoption of international SARPs regulating international air transport. The Convention recognizes the fundamental principle that every State has complete and exclusive sovereignty over the airspace above and within its territory.

2.4.2 Since the signing of the Chicago Convention, the main technical achievement of ICAO has been the agreement of Contracting States on the necessary level of standardization for safe, efficient and regular operation of air services. Standardization has been achieved primarily through adoption of the eighteen Annexes to the Chicago Convention, which cover the spectrum of civil aviation operations.

2.4.3 Through the provision of national regulations, States are expected to implement and enforce SARPs contained in the Annexes to the Convention. Article 12 of the Chicago Convention is very clear in this respect.

2.4.4 Article 38 of the Convention specifies that any State which:

- a) finds it impractical to comply with any international standard or procedure;
- b) is unable to bring its own regulations or practices into full accord with any international standard or procedure after amendment of the latter; or
- c) deems it necessary to adopt regulations or practices differing from those established by international standard,

shall give immediate notification to ICAO of the differences between its own practice and that established by the international standard.

2.4.5 A State's responsibility under the Convention includes aircraft accident and incident investigation. Ensuring that this responsibility is carried out in the most effective manner is fundamental to the conduct of aircraft operations across borders and throughout the world. The basis for this responsibility is enshrined in Article 26 of the Convention.

2.4.6 Annex 13 to the Chicago Convention, and other related ICAO documents, particularly the *Manual of Aircraft Accident and Incident Investigation* (Doc 9756), contain SARPs and guidance material to enable States to fulfil their obligations with respect to aircraft accident and incident investigation.

#### ***Role of governments***

2.4.7 USOAP audits conducted by ICAO have highlighted that many States do not have the necessary resources, both in terms of funding and qualified personnel, to investigate the full range of aircraft accidents and incidents and to carry out thorough analyses of the accident and incident data received. In this regard, governments need to recognize the critical role that civil aviation plays in the overall economy of their respective States and to provide the national civil aviation system with the necessary funding and support including that required for an accident and incident investigation system.

2.4.8 Governments should promote local aviation industries and activities in the region through regional cooperation. Cooperation in this respect does not mean that governments should give up their sovereignty, authority or responsibilities. However, participation in a regional arrangement may present an effective and efficient means for a State to achieve the desired level of accident and incident investigation.

2.4.9 Governments should also ensure a clear separation between the organization responsible for accident and incident investigation and the national civil aviation authorities responsible for regulation and safety oversight of the civil aviation system. (See Chapter 3, 3.5, for details regarding independence.) "Independence" in this regard means that the investigation organization must be functionally independent from any organization, particularly the civil aviation authority of the State, whose interests could conflict with the tasks entrusted to the investigation authority. Such "independence" enhances the credibility of the accident and incident investigation organization and prevents real or perceived conflicts of interest. "Independence" does not mean that the investigation organization would not be administratively supervised and accountable to a government minister or ministry (or parliament) for its finances, administration, policies and working methods, all of which should be transparent.

2.4.10 Governments should make the necessary investments to guarantee that the required means and resources are available to enable an RAIO to fulfil its mission of complying with international SARPs related to accident and incident investigation. Chapter 4 contains details regarding financing an RAIO.



## **Chapter 3**

# **THE ESTABLISHMENT AND MANAGEMENT OF A REGIONAL ACCIDENT AND INCIDENT INVESTIGATION ORGANIZATION**

### **3.1 GENERAL**

As Contracting States of ICAO, States participating in the establishment of a regional accident and incident investigation organization should accept specific obligations with respect to the implementation of internationally agreed SARPs. The organization responsible for accident and incident investigation in each participating State should be responsible for ensuring compliance with the international obligations provided under the Chicago Convention. These obligations include the development and implementation of the standards, procedures, facilities and services necessary to conduct accident and incident investigations in accordance with international SARPs.

### **3.2 ESTABLISHMENT OF A REGIONAL ACCIDENT AND INCIDENT INVESTIGATION ORGANIZATION**

3.2.1 The participation of a minimum number of Member States is required to ensure that the establishment of an RAIO is both realistic and feasible. One of the avenues available for establishing such an organization is to enter into a regional agreement by signing a Memorandum of Understanding (MOU) or a Memorandum of Cooperation (MOC). The agreement document should emphasize the need to coordinate and harmonize the principles, rules and procedures for conducting effective accident and incident investigations in each of the Member States, taking advantage of the opportunities presented by pooling resources and expertise.

3.2.2 The agreement document (reference Appendix 1, Model Agreement) should contain articles promoting and enabling the establishment of an RAIO that is designed to enable Member States to meet their accident and incident investigation responsibilities in conformity with the safety provisions of the Chicago Convention and its Annexes. For the regional organization to succeed, Member States must commit to full participation in all of its activities.

3.2.3 In addition to defining the legal status of the RAIO, the agreement document should emphasize several aspects and objectives that would enable the organization to be effective, as follows:

- a) The organizational and operational procedures of the RAIO should be defined and presented in an internal set of approved regulations and in a manual of internal technical policies and procedures that must be agreed upon by Member States.
- b) The RAIO should be capable of recommending necessary measures and providing technical assistance to enable Member States to overcome the deficiencies identified by the ICAO USOAP and other audits.
- c) The RAIO should develop and adopt technical and operating regulations, in accordance with ICAO SARPs, for the uniform conduct of accident and incident investigations.
- d) The RAIO should establish a system for amending its operational regulations and procedures consistent with the amendments introduced to relevant Annex provisions.

- e) Based on commonly adopted regulations, policies and procedures, the RAIO should be able to provide the required assistance to Member States for accident and incident investigations.

3.2.4 To effectively implement and participate in the RAIO, Member States should honour the commitments and obligations contained in the agreement document by providing information that would enable the RAIO to:

- a) inform Member States about the status of safety in order to adopt appropriate safety measures;
- b) request Member States to take proper steps to overcome the deficiencies identified by ICAO USOAP and other audits; and
- c) ensure that Board members and technical personnel assigned to the RAIO neither request nor receive instructions with regard to the performance of their duties from any authority other than the authorities of the RAIO, in accordance with established rules and on the basis of the approved regulations, policies and procedures of the RAIO. In so doing, the RAIO will be able to conduct independent investigations.

3.2.5 The host State should support the work of the RAIO by facilitating its smooth operation, including the provision of authorizations, approvals, permits and logistic support required for the conduct of RAIO activities.

3.2.6 Member States should provide the necessary support to ensure the effective operation of the organization and the achievement of its objectives and should also meet their financial obligations as established by the agreement document.

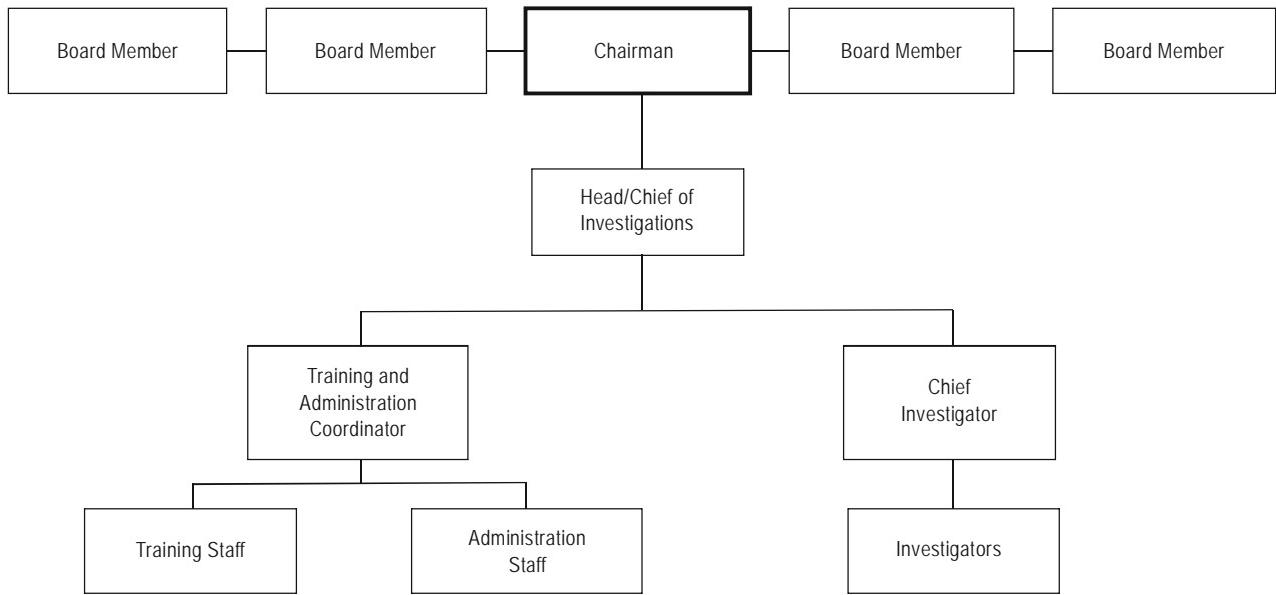
3.2.7 The organizational structure of the RAIO should be based on a legal foundation. Thus, its components and the primary functions of its officers should be established in the agreement document. Figure 3-1 depicts an example of the organizational structure of a generic RAIO. The duties and responsibilities of the officers are detailed in 3.9.

### **3.3 QUALIFICATIONS OF RAIO OFFICIALS**

The Chairman will preferably have a minimum of five years' experience as an aircraft accident investigator and experience as an investigator-in-charge (IIC). The Board members will preferably have a minimum of five years' experience in a technical position in the aviation industry. The Head/Chief Investigator will preferably have a minimum of ten years' experience in the aviation industry and five years' experience as an investigator, as well as experience as the IIC for the management of accident and incident investigations. The TAC will preferably have a minimum of five years' experience as a manager of training and administration matters. If the duties of the TAC are split into two positions, the two individuals will preferably have five years' experience in their respective specialties. Investigators assigned to the RAIO will preferably have five years of background and experience in the aviation industry, as well as specific training in aircraft accident and incident investigation. Chapter 6 contains detailed guidance on training of RAIO staff, including requirements for documenting experience and training.

### **3.4 LEGAL FRAMEWORK**

3.4.1 To provide an adequate legal framework for the proposed RAIO, an agreement acceptable to all interested States, which meets their common accident and incident investigation needs, must be reached. Different approaches can be taken depending on the purpose and objectives of Member States:



**Figure 3-1. Generic organizational structure of an RAIO**

- a) Member States may opt for the legal establishment of an RAIO by means of a diplomatic conference attended by high-level government decision makers who agree to the creation of a constitutional charter for an RAIO. The charter should clearly describe the required commitment, dedication, function and responsibility of Member States in the implementation and continuity of the RAIO. The organization created under the constitutional charter may be limited to an oversight role, while Member States would conduct the actual investigations. Or, the organization may be delegated to conduct the whole or part of investigations on behalf of the Member States. Additionally, the charter may be developed to enable a progressive transfer of functions to the RAIO. The agreement reached should clearly delineate the Member States and the roles and responsibilities of the RAIO.
- b) Regardless of the extent of the functions transferred to the RAIO by the relevant accident and incident investigation authorities of its Member States, the agreement should include the development and approval of common, standardized regulations, policies and procedures relating to accident and incident investigation. Transfer of such responsibilities however does not absolve States from their accident and incident investigation obligations under the Chicago Convention.

*Note.— States in a region may agree only to improved collaboration among their respective accident and incident investigation authorities, in terms of the compatibility of regulations and the provision of technical support. Although this type of arrangement may contribute to the enhancement of safety in the region, it does not constitute the establishment of an RAIO, as advocated in this manual.*

**3.4.2** In either case cited in 3.4.1 a) or b), the most important consideration in establishing an RAIO is that it be established on a legal basis that clearly indicates its legal standing and the level of its responsibility within Member States.

**3.4.3** One of the legal instruments available to States is the Memorandum of Understanding (MOU) or Memorandum of Cooperation (MOC). In practical terms, there is little difference between the two; what really matters is the level of authority Member States bestow on the regional organization. Some States have made use of a Letter of

Intent. The legal status of the regional organization, including the extent of its duties and the level of its authority, should be clearly determined and spelled out in the agreement document. Some States may elect to use other arrangements to address the duties of the RAIO.

3.4.4 The agreement document should also define the role and responsibility of each of the Member States in relation to the RAIO. The following points and other similar questions should be clearly addressed during the initial stage of defining the legal status of the regional organization:

- a) the level of participation of a State's accident and incident investigation organization in the activities of the RAIO;
- b) whether the RAIO will conduct its activities on the basis of a Member State's national regulations or common regulations to be promulgated and equally implemented in all Member States;
- c) if no common regulations are to be promulgated, the agreement should clearly define how the RAIO will reconcile differences that may exist between the regulations of Member States and international SARPs;
- d) the role of accident and incident investigators during the conduct of an investigation by the RAIO;
- e) which entity (RAIO or investigation authorities of Member States) will be responsible for the notification and reporting procedures associated with the accident/incident, as set out in Annex 13, including initial notification, the Preliminary Report, the ADREP Report and the Final Report; and
- f) what type of oversight will be conducted by Member States of the RAIO to ensure the fulfilment of each Member States' responsibility under the Convention.

3.4.5 The agreement establishing the RAIO must be registered with ICAO, as per Article 83 of the Convention on International Civil Aviation.

### **3.5 INDEPENDENCE**

3.5.1 In accordance with Doc 9756, Part I — *Organization and Planning*, an accident investigation authority (agency, commission, board or other body) must be strictly objective and totally impartial and must also be perceived to be so. It must also be able to conduct investigations in an independent manner that can withstand political or other interference or pressure. Other relevant references are as follows:

- a) In accordance with Annex 13, Chapter 3, 3.1 — Objective of the investigation:  
“The sole objective of the investigation of an accident or incident shall be the prevention of accidents and incidents. It is not the purpose of this activity to apportion blame or liability.”
- b) In accordance with Annex 13, Chapter 5, 5.4:  
“The accident investigation authority shall have independence in the conduct of the investigation and have unrestricted authority over its conduct ....”
- c) In accordance with ICAO Annex 13, Chapter 5, 5.4.1:  
“Any investigation conducted in accordance with the provisions of this Annex shall be separate from any judicial or administrative proceedings to apportion blame or liability.”

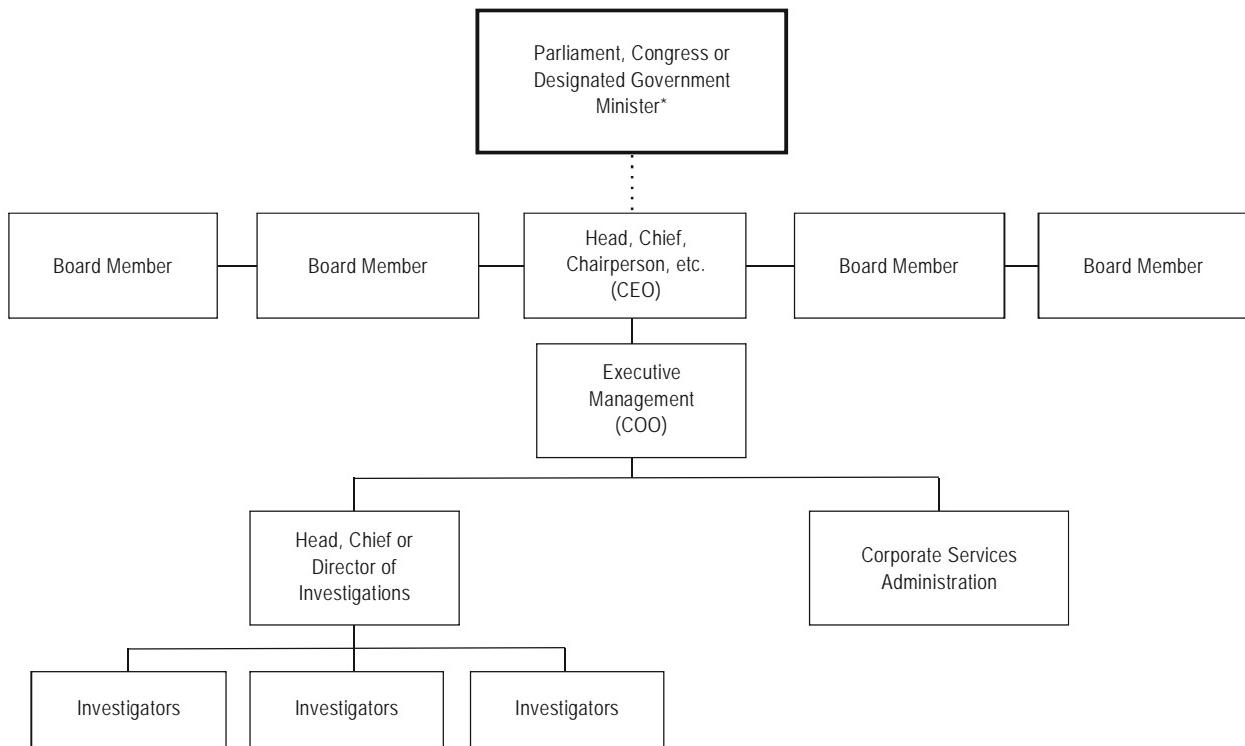
*Note.— Separation can be achieved by having the Annex 13 investigation carried out by the RAIO representing the Member States' accident investigation authorities and by having any judicial or administrative proceedings conducted by other appropriate experts, taking into account the need for coordination between the separate investigations.*

- d) In accordance with ICAO Annex 13, Chapter 5, 5.4.3:

**'Recommendation.'**— *A State should ensure that any investigations conducted under the provisions of this Annex have unrestricted access to all evidential material without delay and are not impeded by administrative or judicial investigations or proceedings."*

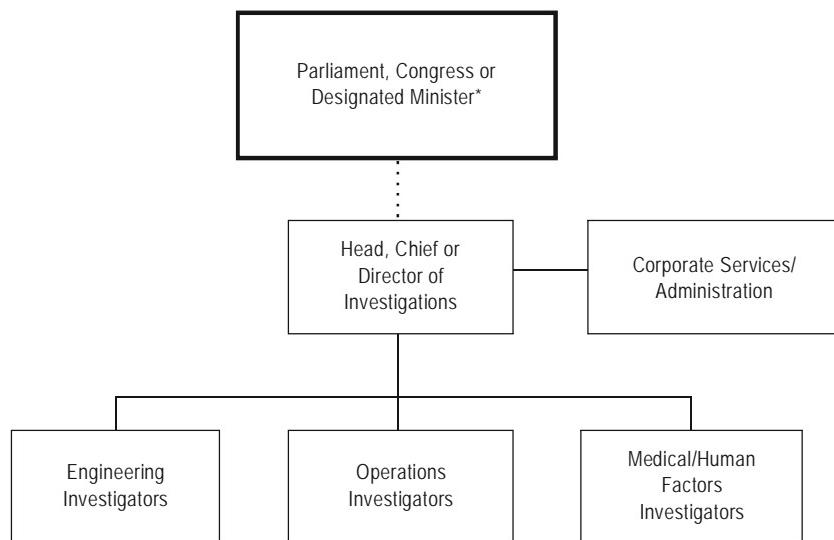
*Note.— The intent of this recommended practice may be achieved through legislation, protocols or agreements between the RAIO authorities and the judicial authorities.*

3.5.2 Figures 3-2 and 3-3 illustrate how some States organize their accident investigation authorities to meet the "independence" requirements of Annex 13 and Doc 9756. Figure 3-2 is a complex organization with a politically appointed Chairman and Board members, who normally are not investigators. Figure 3-3 is a more streamlined organization that does not have a Board. Such an organization is most often led by an experienced investigator as the senior official. It should be noted that, in both cases, the reporting requirements to the Parliament, Congress or designated Minister are purely administrative, and the organizations are fully separate from any regulatory/safety oversight authorities and from judicial authorities. Attention is drawn to 3.2.4 c), which is aimed at ensuring that RAIO officials (e.g. Board members, technical personnel) conduct investigations in an independent manner.



\* The investigation authority should not report to the same Minister responsible for the regulation and/or safety oversight of civil aviation in the State nor should it report to the judicial authority.

**Figure 3-2. Example of a complex organizational structure**



\* The investigation authority should not report to the same Minister responsible for the regulation and/or safety oversight of civil aviation in the State nor should it report to the judicial authority.

**Figure 3-3. Example of a streamlined organizational structure**

### 3.6 OBJECTIVES

3.6.1 The main objective of the RAIO is to assist Member States in meeting their accident and incident investigation obligations and responsibilities under the Chicago Convention, its Annexes and other safety-related procedures and practices.

3.6.2 Effective implementation of the main objective of the RAIO will require that Member States:

- a) undertake the necessary steps to develop and promulgate common regulations, policies and procedures for accident and incident investigation;
- b) participate in RAIO activities with the objective of assisting other Member States in accident and incident investigations;
- c) develop and establish a regional training programme for the technical personnel of Member States including training courses and seminars/workshops aimed at understanding and implementing common accident investigation regulations, policies and procedures; and
- d) contribute to the maintenance of a safe, efficient and economic air transport system as a means to support the social, economic and cultural development of the region.

3.6.3 Additional objectives of an RAIO may include the following:

- a) strengthening the regional institutional framework for aviation safety and assisting in the development of a harmonized regulatory framework for the region;

- b) promoting a comprehensive systems approach to the conduct of accident and incident investigation activities, focusing on the effective implementation of relevant SARPs;
- c) developing an information system to facilitate access to safety-related and safety-critical information within the region, taking into account guidance contained in Attachment E to Annex 13 regarding the protection of safety data collection and processing systems (SDCPS);
- d) serving as a depository of accident and incident investigation data; and
- e) processing and monitoring safety recommendations, both issued and received.

3.6.4 It is important to note that ICAO's support of regional initiative relies on:

- a) well-defined and documented strategic objectives requiring the active participation of accident and incident organizations in their preparation;
- b) the strong commitment of recipient governments to the concept of a regional accident and incident investigation system; and
- c) a degree of assurance of the viability and sustainability of the system to be established.

### **3.7 THE ROLE OF ICAO**

ICAO can provide assistance to States, if needed, for the establishment and management of an RAIO. Chapter 4 provides more detailed information on such assistance.

### **3.8 RELATIONSHIPS WITH OTHER AVIATION-RELATED ORGANIZATIONS**

3.8.1 Having decided to establish a regional accident and incident investigation organization, Member States may cooperate with other aviation-related international and regional organizations on matters, including, but not limited to, the following:

- a) regulations and legislation;
- b) international events and meetings;
- c) assistance in locating financial resources;
- d) training of technical and administrative personnel; and
- e) identification of areas of common interest.

3.8.2 In establishing a regional accident and incident investigation organization, Member States may engage in different levels of consultation and establish and maintain permanent relationships with other aviation-related organizations through:

- a) the exchange of letters and documents;

- b) mutual visits;
- c) invitations to attend meetings; and
- d) consultation and coordination.

### **3.9 DUTIES AND RESPONSIBILITIES OF A REGIONAL ACCIDENT AND INCIDENT INVESTIGATION ORGANIZATION**

3.9.1 The RAIO should have a clearly defined mission statement that should also be included in the agreement document. The mission statement will depend on what Member States agree should be the extent of the duties and responsibilities of the RAIO, i.e. merely providing oversight of States' investigations or actually conducting the whole or part of investigations on behalf of Member States. Further, it should include the provision of advice and assistance to Member States. The mission statement should also contain elements to enable Member States to implement an effective and efficient accident and incident investigation organization that meets international requirements.

3.9.2 The mission statement should also provide for the implementation of common regulations, standards, procedures and documentation relating to standardization of processes and procedures for accident and incident investigation.

### **3.10 ORGANIZATIONAL STRUCTURE OF A REGIONAL ACCIDENT AND INCIDENT INVESTIGATION ORGANIZATION**

#### **3.10.1 General**

3.10.1.1 The establishment and management of a regional accident and incident investigation organization should be based on the participation and commitment of the accident and incident investigation authorities of Member States. Its ultimate purpose, objectives, activities, output, result indicators and duration should be clearly defined before it becomes fully functional.

3.10.1.2 Regardless of the size and scope of aviation activities in the Member States, each Member State must appoint a "Head" or "Chief" of Investigations, or similar position, to represent matters related to accident and incident investigation within each State, keeping in mind that an accident and incident investigation organization/person must be functionally separate (independent) of the civil aviation organization responsible for regulation and safety oversight in the State.

3.10.1.3 States may wish to start with a basic RAIO structure that can evolve into a more complex organization. The rate of evolution may depend on the success or failure of States' efforts to comply with the defined objectives of the proposed regional system and on their interest in meeting the demand for an effective decision-making process required for the establishment and management of an effective and robust regional accident and incident investigation system.

3.10.1.4 In a basic RAIO, the national accident and incident investigation authority retains full responsibility for investigation activities within a Member State, while the RAIO develops and provides standardized, common regulations, policies and procedures for accident and incident investigation, provides oversight of the implementation of such requirements, as well as advice, guidance and assistance to Member States.

3.10.1.5 In a more complex regional organization, the national accident investigation authorities may delegate the whole or part of their functions and responsibilities concerning accident and incident investigation to the RAIO, which would conduct the actual investigation on behalf of Member States. Such investigations would be based on common regional regulations, policies and procedures, while Member States would retain responsibility for the oversight of the system, in accordance with the Chicago Convention.

*Note.— In a case where the whole or part of an investigation is delegated to an RAIO, provisions need to be in place to ensure that certain Annex 13 responsibilities of the State of Occurrence are addressed. For example, the initial response responsibilities, such as initial notification, security of the accident site and protection of evidence, must be undertaken by the State of Occurrence, pending arrival of the RAIO investigation team and assumption of responsibility for the investigation by the RAIO.*

### 3.10.2 Generic organizational structure of an RAIO

3.10.2.1 The organizational structure of a generic RAIO is illustrated in Figure 3-1. It is not all-inclusive, and States are encouraged to build on the example provided in order to establish a regional accident and incident investigation organization that meets their particular needs.

3.10.2.2 In general, the structure of an RAIO can be rather simple, consisting of a leader, such as a "Chairman," "Director of Investigations", or similar title; a "Board", or similar title, and a "Head/Chief Investigator", or similar title. Additionally, the structure should include a "Training and Administrative Coordinator", or similar title. The duties and responsibilities of the various parts of the organization are described below.

#### ***Chairman***

3.10.2.3 The Chairman appointed by Member States is responsible for the overall management and administration of the RAIO as well as the implementation of the policies formulated by the Board in line with the established terms of reference and guidance provided. The Chairman is responsible to the Member States in cooperation and consultation with the Board of the RAIO. The duties and responsibilities of the Chairman should include, but not be limited to:

- a) administering the overall activities of the RAIO and overseeing the activities of all RAIO staff members in order to:
  - 1) liaise with RAIO Member States on issues related to accident and incident investigation and, specifically, the development of regulations, policies, procedures and processes relating to investigation activities in Member States; and
  - 2) ensure the standardization and quality of all RAIO products, such as common regulations, directives, policies, procedures and processes for the accident and incident investigations, as well as Final Reports of investigations and issuance of safety recommendations in Member States;
- b) guiding the planning and execution, as necessary, of additional RAIO activities, such as the:
  - 1) training and recurrent training of the technical staff of the RAIO;
  - 2) development and conduct of seminars/workshops for the administrative and technical staff of Member States;
  - 3) development, publication and maintenance of accident and incident investigation-related documentation (guidance material) for Member States; and

- 4) development, publication and maintenance of manuals and handbooks required for the management and administration of the RAIO;
- c) coordinating the resources and activities of the RAIO to ensure its effective and efficient operation;
- d) liaising with Member States' administrations and other organizations that have established a relationship with the RAIO in order to second experts or secure funding for the proper operation of the RAIO;

*Note.— Funding of the RAIO is most critical in order for it to fulfil its organizational responsibilities, as well as the international responsibilities and obligations of Member States for accident and incident investigations. Funding involves the cost of the day-to-day operations of the RAIO, including its routine accident and incident investigation obligations, as well as considerations for contingency funds to cover extraordinary costs, such as for an aircraft lost at sea or in a remote, inaccessible area. Chapter 4 contains more details about funding of an RAIO.*

- e) representing the RAIO or Member States at international and regional accident and incident investigation-related meetings, conferences, symposia, etc.;
- f) developing reports and working papers for the Board, as required, on the activities of the RAIO; and
- g) performing other duties as assigned by the Board.

### ***The Board***

3.10.2.4 For a regional accident and incident investigation system to be effective, it is essential that all Member States be represented on the Board of the RAIO.

3.10.2.5 The Board should be responsible for formulating policy, appointing the Chairman of the Board (CEO), determining the budget, specifying the terms of reference and performing other activities related to the overall management and policy-making process of the RAIO.

3.10.2.6 The Board should also be responsible for providing guidance to the Chairman on issues related to regional and international relationships and for determining the general principles that will guide the work of the RAIO.

3.10.2.7 It should be noted that the responsibility for implementation of SARPs and common operational regulations for accident and incident investigation remains that of individual Member States and not that of the RAIO or its Board; however, the RAIO can provide the means for States to meet such responsibilities.

3.10.2.8 As indicated earlier, the primary responsibility of the RAIO is to perform accident and incident investigation-related tasks on behalf of Member States under the overall guidance of the Board, which should be composed of high-level representatives from each Member State.

### ***Training and administrative coordinator (TAC)***

3.10.2.9 The training and administrative coordinator (TAC) is responsible for all training-related activities of the RAIO and also assists the Chairman in the administration of the RAIO. Training requirements are described in more detail in Chapter 6.

3.10.2.10 Training-related responsibilities include the planning, development and maintenance of training courses and seminar/workshop material, as well as the training of technical experts of Member States.

3.10.2.11 Administration-related responsibilities include the management of the selection and recruitment process, assignment of tasks, planning and development of activities and schedules and the timely dissemination of RAIO products.

3.10.2.12 Depending on the size of the RAIO, the level of its authority and the complexity of its activities, the duties and responsibilities of the TAC may be split into two distinct offices: training coordinator and administrative coordinator. However, whether structured under one office or two, the duties and responsibilities of the TAC should include but not be limited to:

- a) planning, developing (under the guidance of the Chairman and Head/Chief Investigator), organizing, coordinating and conducting accident and incident-related seminars, workshops and investigator training courses;
- b) preparing and coordinating the preparation of accident and incident investigation seminars, workshops and training material and ensuring the timely submission of seminar and training material by other officers;
- c) planning and coordinating activities related to the development and updating of technical training manuals and guidance material;
- d) ensuring that material required for seminars, workshops and training courses is up to date and readily available;
- e) developing and coordinating the development of guidance material for RAIO staff and the technical staff of Member States;
- f) coordinating and integrating the guidance material produced by the RAIO Secretariat, consultants or other external organizations;
- g) coordinating with the Head/Chief Investigator the development and dissemination of information related to RAIO activities;
- h) ensuring the timely production and distribution of RAIO products, such as reports, documents and time-sensitive correspondence;
- i) monitoring the supervision of administrative support activities performed by the RAIO general service staff;
- j) representing the RAIO at international and regional accident and incident investigation-related meetings, conferences, symposia, etc.;
- k) supervising the maintenance of RAIO personnel records, including records relating to the training of personnel;
- l) liaising with the relevant sections of the RAIO for the collection and collation of material required for the development of guidance material, training, seminars and workshops;
- m) reviewing travel claims for accuracy and for adherence to staff rules and regulations;

- n) performing other assignments as necessary and as assigned by the Chairman; and
- o) keeping abreast of developments and trends in the specialized fields of concern to the RAIO by studying periodicals, reports and manuals.

***Head/Chief Investigator***

3.10.2.13 The Head/Chief Investigator has, under the leadership of the Chairman, the overall responsibility for all accident investigation-related work conducted by the RAIO including the supervision and control of the activities of the investigators and the support (administrative) staff. The responsibilities of the Head/Chief Investigator include but are not limited to:

- a) developing, for the approval of the Chairman and the Board, the qualification and experience criteria for the selection and recruitment of the investigation and support staff;
- b) assigning and distributing duties to the investigation and support staff and conducting overall supervision of their work-related activities;
- c) assisting the Chairman and Member States with the accident and incident investigation activities of the RAIO as well as with related investigation activities within Member States;
- d) liaising with regional and international aviation safety-related organizations on technical issues of mutual interest aimed at enhancing the quality of accident and incident investigations;
- e) ensuring the quality of the technical work of the investigation and support staff through the provision of training, guidance and briefings, as required;
- f) ensuring the quality of the products of the organization, particularly accident and incident investigation reports and safety recommendations to prevent future accidents;
- g) analysing the technical reports, including accident and incident reports, produced by the investigation staff and approving all reports before their submission to the Chairman, the Board or Member States, as appropriate;
- h) assisting in the planning, development and implementation of the work plan of the organization and activities related to the conduct of accident and incident investigations;
- i) providing guidance to and assisting, as necessary, RAIO investigation staff in the conduct of their specific duties within Member States;
- j) representing the RAIO at international and regional seminars, workshops, conferences, symposia, etc.;
- k) providing guidance to TAC on the development of training materials related to technical aspects, and participating in the conduct of the RAIO technical staff training courses, seminars and workshops;
- l) following up on the implementation of safety recommendations forwarded to Member States or the reasons why they were not implemented;
- m) overseeing the RAIO system for follow-up of actions taken on safety recommendations developed during accident and incident investigations, issued to or received from a State, to determine what actions were taken to adopt the safety recommendations or the reasons why actions were not taken.

- n) assisting the Chairman in the planning and execution, as necessary, of all additional activities of the organization, such as the:
  - 1) training and recurrent training of the technical staff of the organization;
  - 2) development, publication and maintenance of accident and incident investigation-related documentation (guidance material) for the use of Member States; and
  - 3) development, publication and maintenance of manuals and handbooks required for the management and administration of the technical programme of the organization;
- o) performing other duties as assigned by the Chairman; and
- p) keeping abreast of developments and trends relating to aviation safety in general, and accident and incident investigation in particular, by studying periodicals, reports and manuals.

***RAIO investigators***

3.10.2.14 The proposed organizational structure assumes that qualified investigators would be recruited by the RAIO to cover all areas of its responsibility.

3.10.2.15 The number and composition of the investigators very much depends on the level of activities of the RAIO and the level of authority bestowed on it. Several modalities can be considered in this regard. For example, Member States may second investigators under a separate agreement, or under the principal agreement that established the organization, as part of their contribution to the establishment and maintenance of the RAIO. Alternatively, Member States may allow investigators to be directly recruited by the RAIO under the sole responsibility of the organization. In any case, the RAIO should identify one investigator to cover a given specialty area and to serve as a focal point for activities related to that specialty.

3.10.2.16 Member States, depending on the extent of the tasks (and responsibility) they intend to transfer to the RAIO, may need to maintain a certain level of capability for accident and incident investigation, which is a direct obligation of a State under the Convention. Regardless of the level of authority bestowed on the RAIO, Member States should be mindful that the ultimate responsibility for these activities remains that of the individual Member State. The major benefits of establishing a regional accident and incident investigation organization (sharing of resources) can only be achieved if the RAIO is enabled to act on behalf of Member States, to the highest possible extent, with States maintaining supervisory control to ensure that the system established enables them to effectively meet their international obligations.

3.10.2.17 Depending on the structure of the RAIO and arrangements agreed upon by Member States, RAIO investigators may be required to assist Member States with their accident and incident investigation obligations. Because these activities would be conducted under the direct control of the individual Member States, it would enable them to individually meet their responsibilities and obligations.

3.10.2.18 The ability of the RAIO to effectively assist Member States depends, to a large extent, on the competence of its investigators. To effectively fulfil its responsibilities, the RAIO must be properly organized and staffed with appropriately qualified, trained and experienced personnel capable of accomplishing the wide range of investigation duties assigned to the organization.

3.10.2.19 The investigation of civil aviation accident and incidents requires an in-depth knowledge of a wide range of complex technical matters. Effective execution of investigation tasks depends, to a large extent, on the qualifications,

experience, competence and dedication of the investigative staff of the RAIO. For some unique, highly complex tasks, such as readouts of flight recorders, metallurgy and simulation, the RAIO may require the assistance of other States, outside of the RAIO, which possess such expertise.

3.10.2.20 In addition to technical competency, it is critical that investigation staff possess a high degree of integrity, be impartial in carrying out their tasks, be tactful, have a good understanding of human nature and possess good communication skills. Considering the specialized and sensitive nature of the RAIO's mission, it is vitally important that the qualifications, previous experience and personal characteristics of each person employed, whether directly recruited by the RAIO, or seconded from Member States or other States, to perform accident and incident-related tasks on their behalf, be verified and carefully evaluated before they are selected.

3.10.2.21 RAIO investigation staff should be properly qualified. For example, an investigator assigned to investigate airline operations, including flight crew activities must have airline and flight crew experience commensurate with the areas to be investigated.

3.10.2.22 RAIO accident and incident investigation staff must not only be able to assist Member States with their investigations, but must also ensure that such investigations are conducted in compliance with the provisions of Annex 13. In addition, they must ensure that such information is used solely for the purpose of accident prevention, is protected in accordance with the guidance provided in Attachment E to Annex 13, and is made available to States.

3.10.2.23 The intent is for the RAIO to be organizationally competent, which may require it to recruit a team of investigation personnel with expertise in a mix of disciplines. As much as practicable, they should be as knowledgeable, qualified and experienced, individually or as a team, as the organization being investigated. This will permit RAIO investigation staff to better assess the knowledge, techniques and activities of the civil aviation personnel, operators, service providers and maintenance organizations in Member States, related to any particular incident of accident.

## **Chapter 4**

# **FINANCING A REGIONAL ACCIDENT AND INCIDENT INVESTIGATION ORGANIZATION**

### **4.1 BENEFITS FROM ECONOMIES OF SCALE**

4.1.1 The key objective of establishing a regional accident and incident investigation organization is to enable States to meet their international obligations in the most effective and efficient manner. Establishing a regional accident and incident investigation organization allows for:

- a) economies of scale to be achieved;
- b) investigation personnel, knowledge and technology to be shared; and
- c) administrative savings to be realized without sacrificing effectiveness.

4.1.2 In achieving economies of scale, many factors must be considered, not least of which is the implementation of a regional technical assistance system for Member States in order to:

- a) share objectives, strategies and activities in order to overcome shortcomings in the implementation of accident and incident investigation responsibilities at the national and regional levels;
- b) attract, pool and retain highly skilled investigation personnel for the multinational and multifunctional teams of investigators that assist Member States in meeting their obligations with respect to accident and incident investigation; and
- c) develop and implement joint regulations, policies, procedures and common guidance material to be applied at the regional level, benefiting all aviation accident and incident investigation activities in the region and also enhancing harmonization at the global level.

### **4.2 SOURCES OF FINANCING**

4.2.1 Entering into an agreement to establish an RAIO requires the preparation of an estimate of the level of funding that will be required to maintain and sustain the organization in terms of the legal and organizational structure, administrative and office equipment, personnel training, material, equipment upgrades and other costs related to its operation.

4.2.2 Together, Member States should identify the resources required to establish and manage the new organization over the long term. In some cases, the establishment of the organization may require assistance (financial and/or technical) from the ICAO Regional Offices, the Technical Co-operation Bureau (TCB) of ICAO, donor States, international or regional organizations, financial institutions, manufacturers or other sponsors. In all instances, it is imperative that the amount required for the establishment and maintenance of the organization be estimated and its financing planned for.

*Note.— Because the RAIO must be functionally separate (independent) from the organizations it would be investigating, including the regulatory and safety oversight authorities, airlines, manufacturers, etc., due care regarding the sources of funding must be taken to avoid a real or perceived conflict of interest.*

4.2.3 It should be noted that funding partners, regardless of their size, shape or nature, will want to ensure the commitment of Member States, in part through a planned contribution programme, to the establishment and effective maintenance of the RAIO.

### **4.3 TRUST FUNDS**

4.3.1 Member States desiring to establish an RAIO may elect to contact ICAO Regional Offices, which can help them set up the framework and structure of the RAIO. Additionally, should Member States require technical assistance with the creation and administration of an RAIO, they may consult with TCB which has the capability to efficiently implement civil aviation development projects, including the global recruitment of highly qualified experts, the management of training programmes and the cost-effective purchase of equipment required for an RAIO. TCB's capabilities may help the creation of an appropriately structured RAIO. Should Member States elect TCB to assist them in the establishment of an RAIO, TCB will study the financial requirements and advise Member States of the funding required to establish and manage an RAIO.

4.3.2 TCB services are normally funded through trust funds coming from the States themselves or provided by other entities on behalf of States. Funds made available to TCB by Member States are administered as trust funds. Any interest earned is added to the trust fund and is used, when necessary, to cover project activities. The trust fund account is maintained by TCB in accordance with relevant financial regulations. TCB furnishes periodic statements showing the quarterly status of the trust fund. The year-end statement is submitted only when the accounts for the year have been closed and audited by an external auditor.

4.3.3 The service provided by TCB in administering trust funds is one example of funding possibilities, and States can also investigate similar arrangements that may be available on the market. What is important is that States intending to establish an RAIO should, as one of the first steps, consider the financial obligations and funding sources.

*Note.— At least one ICAO Member State has made use of an insurance policy in planning for contingency funds for large and costly investigations. The premiums for the policy are part of the annual accident and incident investigation authority's budget and provide assurances that emergency funds will be available in the event of the need for extraordinary funding of an investigation that exceeds the annual operating budget.*

### **4.4 STATES' OBLIGATIONS AND CONTRIBUTIONS**

4.4.1 Member States should establish a mechanism to ensure that the funds required for the establishment and management of an RAIO, corresponding to the cost-sharing plan of Member States, are deposited in a timely manner. The lack of timely payment of Member States' contributions to the organization could delay or impede its effectiveness. Possible delays in the time required to process these payments should also be taken into account because processing delays will have the same negative effect as would non-payment.

4.4.2 The success of the regional organization will depend greatly on the commitment of its Member States to fulfilling their obligations to the RAIO. Meeting their financial obligations will be a strong indicator of their commitment without which the RAIO may fail to function effectively and States may not be able to meet their accident and incident investigation obligations.

### **4.5 DEVELOPMENT OF A BUDGET**

4.5.1 The financial requirements should be based on an annual budget that includes the estimated operating cost of the RAIO. It is possible that the financial requirements of an RAIO may not be fully met by the contributions from

Member States, and it may have to devise a system to generate additional funds. However, although the RAIO may be able to generate funds in the long term, it is imperative that, at least in the first few years of its existence, an adequate annual budget be developed that can be fully supported through the contributions from Member States.

4.5.2 The amount to be paid by each Member State may vary depending on the size and complexity of its aviation activities and the risk associated with its aviation operations. This, of course, would have to be addressed early in the agreement entered into by Member States. However, it should be noted also that the amount contributed by States with significantly larger aviation activities will have a greater impact than that of States with smaller aviation activities.

4.5.3 It is advisable that the budget specifically indicate the annual contribution required from each Member State and the other sources of funding that the RAIO has obtained.

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## **Chapter 5**

# **IMPLEMENTATION OF THE REGIONAL ACCIDENT AND INCIDENT INVESTIGATION ORGANIZATION**

### **5.1 INTRODUCTION**

5.1.1 Once established, the major objective of an RAIO is to implement its programme and ensure the fulfilment of States' international obligations for accident and incident investigation. Member States have the responsibility to formalize the announced objectives of the RAIO and to meet their commitments to enable the RAIO to implement the established programme.

5.1.2 The specific objectives of an RAIO should be to:

- a) strengthen the regional institutional framework for accident and incident investigations among Member States;
- b) promote a comprehensive systems approach to the conduct of accident and incident investigation activities, focusing on the effective implementation of relevant SARPs and an efficient investigation capability of Member States;
- c) develop a regional information-sharing system in order to improve access to safety-related information that is protected in accordance with guidance provided in Attachment E to Annex 13; and
- d) assist States to integrate Annex 13 SARPs into their national regulations.

### **5.2 COMPLIANCE WITH SARPS**

5.2.1 The majority of the articles of the Chicago Convention establish the rights and obligations of all Contracting States and provide for the adoption of international SARPs regulating international air transport. The Convention recognizes the fundamental principle that every State has complete and exclusive sovereignty over the airspace above and within its territory.

5.2.2 Article 37 of the Chicago Convention specifies that Contracting States must collaborate in securing the highest practicable degree of uniformity in regulations, standards, procedures and organization in relation to aircraft, personnel, airways and auxiliary services in all matters in which such uniformity will facilitate and improve air navigation. To this end, ICAO has adopted SARPs dealing with practically all activities concerning the operation of an aircraft, including accident and incident investigation. However, it is the integration of these SARPs into the national regulations and practices of Contracting States and their timely implementation that will ultimately achieve safety and regularity of aircraft operations worldwide.

### **5.3 REGULATIONS, GUIDANCE MATERIAL, PROCEDURES AND PROCESSES**

5.3.1 When implementing the objectives of the RAIO, Member States must keep in mind that the obligations of an individual State under the Chicago Convention remain unchanged. These obligations include, *inter alia*, the conduct of aircraft accident and incident investigations in accordance with Annex 13.

5.3.2 Depending on its terms of reference and the way it is structured, the RAIO may be in a good position to assist Member States in fulfilling these obligations through the use of multinational and multifunctional teams of competent investigators at its disposal.

5.3.3 The RAIO should develop and provide its investigators with guidance on how to accomplish their specific functions, including procedures for planning, organizing and reporting of accident and incident investigations. ICAO has developed and published various technical guidance material to assist States in implementing Annex provisions which may also be used by the RAIO. Regarding accident and incident investigation, the *Manual of Aircraft Accident and Incident Investigation* (Doc 9756) provides detailed guidance on all aspects of accident and incident investigations. However, the RAIO may need to develop and publish its own guidance material in the form of a policy and procedures manual to assist its investigators.

5.3.4 Joint aviation regulations promulgated or adopted by Member States as well as the policies, procedures and guidance material developed by the RAIO should facilitate the processes and procedures needed for efficient and effective accident and incident investigations. This approach should result in increased efficiency and effectiveness and the optimization of Member States' resources.

#### **5.4 REPORTING AND SHARING OF INFORMATION**

5.4.1 The RAIO should establish procedures for sharing, among Member States, safety-related information as well as the Final Reports of its investigations. As the organization undertaking accident and incident investigation-related tasks on behalf of Member States, it has the responsibility to ensure that every Member State is well informed about the accident and incident investigation situation in every other Member State.

5.4.2 The RAIO can also serve as a depository of accident and incident investigation data to ensure the data are made available to States and the industry, as applicable.

5.4.3 RAIO Member States should also be encouraged to directly share accident and incident investigation information among themselves, with ICAO, as well as with other ICAO Contracting States. The non-sharing of safety information among States, although such information was already known by one or more States, has been identified as a serious shortcoming with the potential for a negative impact on safe aircraft operations. It is believed that had some safety information been freely shared among States, a number of accidents and incidents could have been prevented.

5.4.4 It is very important that the RAIO maintain a record and copies of all reports disseminated and of all safety-related data transmitted to Member States, ICAO and ICAO Contracting States so that such reports and information can be retrieved for accident prevention purposes when necessary.

5.4.5 The RAIO should promote the establishment of a safety information sharing network among all users of the aviation system within its Member States and with other ICAO Contracting States in order to facilitate a free exchange of actual and potential safety deficiencies.

#### **5.5 PROCESSING OF SAFETY RECOMMENDATIONS**

5.5.1 The RAIO should establish policies and procedures for the processing of safety recommendations, either issued or received, including the recording of responses received. Likewise, the RAIO, upon receiving a safety recommendation, should implement procedures to monitor the progress of the action taken in response to that safety recommendation. To this end, due attention should be given to the provisions in 6.10, 6.11 and 6.12 of Annex 13 addressing "Action on safety recommendations".

5.5.2 The RAIO should also establish policies and procedures for the processing of safety recommendations generated from analyses of the RAIO accident and incident database.

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## **Chapter 6**

# **TRAINING PROGRAMME OF THE REGIONAL ACCIDENT AND INCIDENT INVESTIGATION ORGANIZATION**

### **6.1 TRAINING OF TECHNICAL/INVESTIGATION STAFF**

6.1.1 The RAIO must determine the minimum professional qualifications of its technical/investigation personnel and also provide for the technical and administrative training necessary for them to effectively accomplish their duties and responsibilities. Its investigators represent the RAIO and, as such, require the continuing development of their knowledge and skills related to their respective responsibilities. This should be accomplished through initial and periodic training and refresher courses in all the disciplines for which the investigators are responsible. Participation in seminars and workshops organized by ICAO and international and regional aviation-related organizations can also enable RAIO investigators to widen their horizons and share experience with experts from other regions. Additional studies, such as courses in technical report writing and supervisory training will also assist the technical experts in improving their effectiveness and efficiency.

6.1.2 Periodic practical and theoretical specialized (technical) training, including supervisory courses, will enable technical personnel to maintain a high level of knowledge and expertise and undertake their duties and responsibilities in a more effective and efficient manner.

6.1.3 Circular 298, *Training Guidelines for Aircraft Accident Investigators*, provides detailed information regarding the training of investigators. The training involves four phases:

- a) initial training;
- b) on-the-job training;
- c) basic accident investigation courses; and
- d) advanced accident investigation courses and additional training.

Recurrent training on an annual basis will be required to maintain the proficiency and effectiveness of the investigation staff.

*Note.— Because many of the personnel (pilots, mechanics, air traffic controllers, etc.) involved in the operation of the civil aviation system have to meet stringent training and checking requirements, it is essential that accident and incident investigators have comparable requirements, including recurrent training, on a regular basis.*

### **6.2 TRAINING POLICY AND OBJECTIVE**

6.2.1 One of the objectives of the RAIO should be the institution of a regional training policy, together with the development and establishment of a regional training programme, in order to provide the technical personnel of Member States with specialized training courses and seminars/workshops.

6.2.2 This objective should be further enhanced through the implementation of relevant ICAO SARPs, regulations, policies, procedures and guidance material related to the selection and training of RAIO staff, with particular emphasis on funding for the training programme.

6.2.3 The objective of the RAIO training programme should be codified in a regional policy statement or similar document signed by the Chairman, stating that the RAIO will ensure that its personnel are qualified and trained to meet the requirements of the RAIO's mission and that the annual budget will contain sufficient funds to provide the required training for its personnel.

### **6.3 TRAINING PROGRAMME**

6.3.1 The training and administrative coordinator (TAC) should be in charge of the development and implementation of the regional training programme. The TAC should periodically evaluate the training needs of the RAIO personnel assigned to accident and incident investigation responsibilities to determine whether the RAIO training programme covers the needs of all RAIO staff. At this stage, it should be emphasized that training programmes should be established for all staff members and not only for the investigation staff.

6.3.2 Different levels of training will be needed for accident and incident investigators in the RAIO, depending on their areas of responsibility. For example, investigators assigned to investigate only incidents or non-fatal general aviation accidents would not require the level of training that would be required for the investigator-in-charge of a major airline accident. Similarly, investigators assigned to investigate various technical areas, such as flight operations, airworthiness, airports and air traffic services, would require specialized background and training in order to accomplish their tasks effectively and efficiently. Moreover, all investigators would require some level of report-writing skills and training.

6.3.3 An analysis of training needs should be conducted on the basis of the job description of each staff member, and training addressing those needs should be developed and delivered to the personnel concerned.

6.3.4 The training programme's preliminary indoctrination and initial training of new personnel, as well as on-the-job, recurrent and external training of existing personnel, should ensure that RAIO permanent personnel are aware of the relevance and importance of their activities within the system and that they understand how they contribute to the overall achievement of the RAIO's policies and objectives.

6.3.5 If training is provided through the services of an external training service provider, the RAIO should continually monitor the quality of the training provided to its staff. The success of the training activities will depend in part on the effectiveness of the interactions between the TAC, the training service providers and the trainees.

### **6.4 TRAINING PROCESS**

In order to close the gap between the existing and required competence of experts, when selecting and implementing the RAIO training programme, the training coordinator should closely monitor the following stages of the training process:

- a) determination of training needs;
- b) design and planning of training;
- c) provision of training; and
- d) evaluation of training outcomes.

## 6.5 INDIVIDUAL DEVELOPMENT PLAN (IDP)

6.5.1 One means to determine and plan training needs, as well as monitor and evaluate the training needs and outcomes of the training of RAIO staff, is through the use of an individual development plan (IDP). A template for an IDP is contained in Appendix 3, which contains all of the required elements of a staff member's training requirements.

*Note.— The items listed in the template IDP are for reference only. Individual items may be added, deleted or amended to make the IDP directly applicable to any particular staff member.*

6.5.2 Each newly hired person possesses some knowledge, skills and abilities applicable to the assigned tasks; however, the level varies from one person to another. For example, two highly qualified operations investigators may possess extensive flight operations background; however, one may have only limited incident investigation experience, while the other may have considerable major accident investigation experience. Further, investigators require different levels of knowledge, skills and abilities depending on the investigation roles to which they may be assigned. The IDP is an excellent tool for identifying and managing these variables.

6.5.3 The IDP contains the basic requirements of knowledge, skills and abilities that each person either must possess when hired, or must gain through a structured training programme. The IDP also provides a tool to manage and plan each person's training, including a means to project an annual training budget. Further, the IDP can be used to document the necessary steps to be taken for a person to be promoted to higher levels of responsibility, such as from operations investigator to investigator-in-charge. The completed IDP for each staff person becomes the training record, which is filed along with supporting materials, such as certificates and other records of training and experience.

6.5.4 The aviation industry has strict training requirements for pilots, mechanics, cabin attendants, air traffic controllers, etc., and those requirements are evaluated by investigators as part of their accident and incident investigation tasks. Therefore, it is important that equally strict training requirements be in place for investigators. The IDP is an excellent tool to accomplish that task.

6.5.5 Through their participation in the training process, RAIO technical personnel and seconded experts from Member States, whose competence is being developed through the regional training programme, would develop a sense of ownership of the process, resulting in their assuming greater responsibility to ensure its success. The RAIO training process should be monitored on an ongoing basis and improved or amended as deemed necessary.

## 6.6 TRAINING REQUIREMENTS

6.6.1 The RAIO training programme should be an integral part of its regular activity, and RAIO technical personnel and seconded experts from Member States should be adequately trained, properly qualified and fully experienced to perform the job. In addition to any technical training, staff should also be provided with training in the overall responsibilities and activities of the RAIO, the regional accident and incident investigation system, management policies, and ICAO documentation and activities.

6.6.2 The RAIO should also take advantage of external training programmes provided by international or regional organizations and the aviation industry. For example, ICAO occasionally convenes regional accident/incident investigation and prevention seminars or workshops. It is very common for certain large accident investigation organizations (such as the United States National Transportation Safety Board, the Canadian Transportation Safety Board, the Australian Transport Safety Bureau), as well as many European accident/incident investigation authorities to offer training, including observation of ongoing investigations. Further, aircraft manufacturers or airlines periodically offer training courses or seminars/workshops with the objective of enhancing the knowledge and skills of aviation personnel. Such external training programmes may benefit RAIO staff, as well as the technical staff of Member States, and enhance its capability to assist Member States in meeting their accident and incident investigation obligations.

## **6.7 MAINTENANCE OF TRAINING RECORDS**

6.7.1 Records of the training history, including on-the-job training, of all RAIO technical personnel and of the experts seconded from Member States should be maintained at all times. Training records of all staff should be stored in a secure place where their confidentiality should be maintained at all times. The TAC and individual staff members are responsible for ensuring that training records are kept up to date and that their confidentiality is ensured at all times.

6.7.2 The IDP for each individual should be included in the records of training for RAIO personnel.

## **6.8 TRAINING EVALUATION**

6.8.1 The purpose of the training evaluation is to confirm that both the organizational and training objectives have been met. Input used to evaluate training outcomes includes the specifications for training needs and for the regional training programme, and the records from the delivery of the training. It should be recognized that the results of the training often cannot be fully analysed and validated until the trainee can be observed and tested on the job.

6.8.2 Evaluations should be carried out on both a short-term and long-term basis as follows:

- a) In the short-term, trainees' feedback should be obtained regarding the training methods used, as well as the knowledge and skills gained as a result of the training. Trip reports of training courses should be required to facilitate such feedback and evaluations; and
- b) In the long-term, improvement in the trainees' job performance and productivity should be assessed.

6.8.3 Training evaluation/monitoring should be conducted on the basis of established criteria. The main purpose of monitoring is to ensure that the RAIO training programme is being managed and implemented as required so as to provide objective evidence that the programme is effective in meeting RAIO training requirements. Monitoring involves reviewing the entire training process at each of the four steps previously described (see 6.4).

6.8.4 Input for monitoring may include all records from all stages of the training programme, including the IDP. Based on these records, a review of the different stages can be performed to detect non-conformity issues for corrective and/or preventive actions. Such input can be collected on an ongoing basis to provide the basis for validating the training programme and for making recommendations for improvement.

## **6.9 COMPETENCE REQUIREMENTS**

6.9.1 The RAIO's training policy, resource management and training process design should be considered by the training coordinator, when initiating a training programme, to ensure that the required training will be directed toward satisfying the RAIO's training needs.

6.9.2 Competence requirements must also be documented, preferably by use of the IDP. This documentation can be reviewed periodically or whenever necessary as tasks and responsibility assignments are made and the performance of each technical person and expert seconded from Member States is assessed. The definition of the RAIO's future needs, relative to its strategic goals and training objectives, including the required competence of its investigation personnel and that of the experts seconded, may be derived from a variety of internal and external sources, as follows:

- a) organizational or technological changes that affect work processes or have an impact on the nature of services provided by the organization;

- b) training objectives reviewed and amended, as identified during an RAIO's training review meeting;
- c) data recorded from past and current training;
- d) the RAIO's appraisal of the competence of each technical person and expert seconded from Member States for performing specified tasks and responsibilities;
- e) requests from RAIO personnel identifying opportunities for personal development, which contribute to the organization's objectives;
- f) the result of process reviews and corrective actions taken due to customer complaints or reports of non-conformity;
- g) directives from Member States' accident investigation authorities and/or technical committee directives or standards affecting RAIO activities and resources; and
- h) identification or anticipation of new requirements.

6.9.3 The TAC should conduct a regular review of the documents that indicate the competence required for every process and of the records that list the competence of each investigator. The review should be related to task requirements and task performance. Different methods can be used to review the competence of technical investigators, such as:

- a) interviews/questionnaires with technical personnel, supervisors and managers (discussion of the IDP);
  - b) observation;
  - c) group discussions; and
  - d) input from subject-matter experts.
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## **Appendix 1**

# **MODEL AGREEMENT BETWEEN A GROUP OF STATES FOR THE ESTABLISHMENT AND MANAGEMENT OF A REGIONAL ACCIDENT AND INCIDENT INVESTIGATION ORGANIZATION (RAIO)**

### **Preamble**

The parties to this agreement are [List of Member States in the RAIO].

**Whereas** the International Civil Aviation Organization (ICAO) is the international body created by the Convention on International Civil Aviation of 1944 (the Chicago Convention) having as its main objectives the safe and orderly development of international civil aviation, the implementation and adoption of the principles and provisions of the Chicago Convention, including Standards and Recommended Practices concerning accident and incident investigation and any other matters connected with the safety and efficiency of air navigation;

**Whereas** Article 26 of the Convention provides that a State in which an accident to an aircraft occurs within the terms of the Article "will institute an inquiry into the circumstances of the accident in accordance, so far as its laws permit, with the procedure which may be recommended by the International Civil Aviation Organization";

**Whereas** Annex 13 to the Convention specifies Standards and Recommended Practices (SARPs) for the conduct of aircraft accident and incident investigations on the part of States to meet their obligations under Article 26 of the Convention;

**Recognizing** that ICAO USOAP audits and other ICAO missions have shown that many Contracting States have not established and/or managed effective accident and incident investigation organizations, primarily because sufficient resources have not been allocated to meet States' obligations under the Convention and Annex 13 to the Convention;

**Taking into account** the recommendations of the Accident Investigation and Prevention (AIG) Divisional Meeting (2008) (AIG/08) held in Montréal, Canada, from 13 to 18 October 2008, and in particular Recommendation 6/3 a), urging Contracting States to conduct safety investigations pursuant to Article 26 of the Chicago Convention and Annex 13 when an accident occurs in their territory, and to obtain regional support if required capabilities or resources are not available;

**Taking into account** Recommendation 6/1 of AIG/08 that proposed amendments to Chapter 5 of Annex 13 that would make it possible for the State of Occurrence to delegate the whole or any part of the conducting of an investigation to a regional accident and incident investigation organization by mutual arrangement and consent;

**Recalling** Recommendation 4/5 of the Special AFI RAN meeting held in Durban, South Africa, from 24 to 29 November 2008, on the establishment of Regional Accident Investigation Organizations alongside the development and establishment of Regional Safety Oversight Organizations, thus enabling States to meet their international obligations in the area of accident investigation by joining forces and sharing resources that they may otherwise fail to obtain;

**Therefore, the States of** [List of Member States in the RAIO],

**HAVE AGREED AS FOLLOWS:**

**ARTICLE 1  
Definitions**

In this Agreement unless the context otherwise requires:

“Accident” means an occurrence associated with the operation of an aircraft as defined in the current edition of ICAO Annex 13 — *Aircraft Accident and Incident Investigation*.

“Agreement” means this Agreement and any Appendix, Annex or Amendment hereto.

“Board” means the Board established under Article 8 of this Agreement, which is an advisory body to the Chairman.

“Chairman” means the chief spokesman for the [Name of RAIO] and the principal liaison between the Board and the Member States.

“Chicago Convention” means the Convention on International Civil Aviation signed in Chicago on the 7th day of December 1944.

“GASP” means the ICAO Global Aviation Safety Plan.

“GASR” means the Global Aviation Safety Roadmap developed by the Industry Safety Strategy Group and agreed to by the ICAO Council on 15 June 2006.

“ICAO” means the International Civil Aviation Organization.

“Incident” means an occurrence, other than an accident, associated with the operation of an aircraft, as defined in the current edition of ICAO Annex 13 — *Aircraft Accident and Incident Investigation*.

“Investigation” means a process conducted for the purpose of accident prevention which includes the gathering and analysis of information, the drawing of conclusions, including the determination of causes and/or contributing factors and, when appropriate, the making of safety recommendations.

“Investigation team” means a group of aircraft accident and incident investigators who are on call for immediate assignment to investigate an accident or incident.

“Investigator-in-charge” means a person charged, on the basis of his or her qualifications, with the responsibility for the organization, conduct and control of an investigation.

“Member State” means a [Name of RAIO] Member State that is party to this Agreement.

“Serious incident” means an incident involving circumstances indicating that there was a high probability of an accident, as defined in the current edition of ICAO Annex 13 — *Aircraft Accident and Incident Investigation*.

**ARTICLE 2  
Application of the Agreement**

The Agreement will govern the Member States’ cooperation in the investigation of aircraft accidents and incidents.

### **ARTICLE 3 Establishment**

The Member States hereby establish the [Name of RAIO] as an independent accident and incident investigation organization reporting to the Member States.

### **ARTICLE 4 Objectives of the [Name of RAIO]**

The principal objectives of the [Name of RAIO] will be to:

- a) ensure, in accordance with the ICAO Global Aviation Safety Plan, the establishment of an adequately funded, professionally trained, independent and impartial aircraft accident and incident investigation body within the [Name of region];
- b) enhance cooperation and collaboration among the Member States, with respect to the investigation of aircraft accidents and incidents;
- c) enhance cooperation within the [Name of RAIO] and internationally, with respect to the sharing of information on accidents and incidents;
- d) ensure that all aircraft accidents and incidents occurring in Member States are investigated in strict compliance with the provisions of ICAO Annex 13 — *Aircraft Accident and Incident Investigation*, taking into account other ICAO documents pertaining to accident/incident investigation, particularly Doc 9756, *Manual of Aircraft Accident and Incident Investigation*;
- e) ensure the independence of all investigations into aircraft accidents and incidents that are carried out in Member States, from political or other interference or pressure;
- f) ensure the provision of adequate resources, including funding and qualified personnel, for the carrying out of all investigations;
- g) promote, by all Member States, the use of a common set of regulations compliant with the provisions of Annex 13 — *Aircraft Accident and Incident Investigation*, including regulations for the protection of safety data collection and processing systems (SDCPS) as set forth in Attachment E to Annex 13;
- h) promote, by all Member States, the use of common guidance material, investigator manuals and handbooks;
- i) promote the use of best accident prevention practices; and
- j) enhance the qualifications and experience of accident investigators in all Member States.

### **ARTICLE 5 Functions of the [Name of RAIO]**

The functions of the [Name of RAIO] will be to:

- a) strengthen cooperation and collaboration between Member States with respect to the investigation of aircraft accidents and serious incidents;

- b) develop a common set of regulations in the area of accident and incident investigation compliant with the provisions of Annex 13 — *Aircraft Accident and Incident Investigation* and taking into account the delegation of the conduct of an investigation to the [Name of RAIO], by any one of the Member States;
- c) develop common guidance material and investigator handbooks, manuals and checklists for use in the investigation of accidents and incidents that occur in all the Member States;
- d) develop and implement procedures for the sharing of information on accidents and incidents within the [Name of RAIO] and internationally, ensuring that the data system is compatible with the ICAO ADREP system;
- e) develop and implement procedures aimed at facilitating relations between investigation teams and local authorities in States of Occurrence within the [Name of RAIO], to enable the unimpeded investigation of accidents and incidents;
- f) coordinate accident and incident investigation activities among the Member States;
- g) support the accident and incident prevention efforts of the Member States;
- h) monitor the accident and incident investigation activities of the Member States to ensure that they are in line with the ICAO objectives and plans;
- i) monitor and provide input to the formulation of ICAO SARPs in the area of accident and incident investigation;
- j) establish appropriately equipped and trained accident and incident investigation teams;
- k) conduct either the whole or any part of an investigation into an aircraft accident or incident upon delegation by a State of Occurrence in the [Name of RAIO], by mutual arrangement and consent between the State of Occurrence and the [Name of RAIO];
- l) mobilize and solicit technical and financial resources from external sources for the purpose of investigating accidents and incidents;
- m) provide technical and on-the-job training for accident and incident investigators; and
- n) perform any other function that may be necessary for the proper investigation of accidents and incidents under this Agreement.

## ARTICLE 6

### Organizational Structure of the [Name of RAIO]

The [Name of RAIO] will consist of:

- a) the Chairman;
- b) a Board;
- c) the Head/Chief Investigator; and
- d) a Training and Administrative Coordinator.

**ARTICLE 7**  
**The Chairman**

1. The Chairman will be appointed by Member States preferably for a period of three years on such terms and conditions as the Member States may determine, including possible reappointments for additional terms of three years.
2. The Chairman will preferably have a minimum of five years' experience as an aircraft accident investigator and experience as an investigator-in-charge (IIC).
3. Subject to the policy directions of the Member States, the Chairman will carry out the following functions:
  - a) convene the meetings of the Board;
  - b) supervise and coordinate the work of his/her Office with respect to the development of common accident and incident investigation regulations for the adoption and use by the Member States;
  - c) supervise and coordinate the work of his/her Office with respect to the development of common guidance material, investigator handbooks and manuals and checklists for use in investigations in Member States;
  - d) coordinate with Member States the deployment of the Board's investigation teams for the purpose of carrying out investigations into aircraft accidents and incidents, upon delegation by the State of Occurrence;
  - e) supervise and coordinate the establishment and maintenance of a database of aircraft accidents and incidents compatible with the ICAO ADREP system;
  - f) supervise and coordinate the establishment and maintenance of a list of aircraft accident investigators available as members of the Board's investigation teams;
  - g) supervise the development and implementation of a training programme for accident and incident investigators;
  - h) supervise the exchange and sharing of information with Member States and relevant agencies on accidents and incidents;
  - i) supervise the development of staff regulations, rules and procedures and undertake the general management of the Office of the Chairman.
  - j) manage the delivery of technical support to Member States in the area of accident and incident investigation;
  - k) prepare an annual programme of activities and budget for the [Name of RAIO] and implement the approved programme, once approved by Member States;
  - l) prepare an annual report of activities of the RAIO, including the conduct of accident and incident investigations and status of reports and safety recommendations issued;
  - m) service meetings of the Board and provide support to the Board;

- n) assess and approve applications by third States outside of the RAIO seeking assistance from the [Name of RAIO]; and
  - o) perform any other duty assigned by the Member States.
4. The Chairman will be the chief spokesperson of the [Name of RAIO] and the principal liaison between the Member States and the [Name of RAIO].
5. The Chairman will be responsible to the Member States.

**ARTICLE 8**  
**Establishment, Composition and Functions of the Board**

1. The Board or similar body will act as an advisory body to the Chairman.
2. The Board will consist of the following members:
  - a) the Chairman; and
  - b) one Board member from each of the [Name of RAIO] Member States.
3. Members of the Board, other than the Chairman, will be nominated by each of the Member States.
4. Members of the Board, other than the Chairman, will:
  - a) have preferably a minimum of five years' experience in a technical position in the aviation industry; and
  - b) have been appointed as an investigator or investigator-in-charge in their respective Member States.
5. The Chairman will preside at all meetings of the Board and in his/her absence, he/she will delegate one of the members of the Board to preside over a meeting on his/her behalf.
6. If a member of the Board is unable to attend a meeting of the Board, that member may designate a representative to attend the meeting.
7. The designated representative will, for the purpose of that meeting, have all powers, duties and responsibilities of the member of the Board for whom that person is acting.
8. The functions of the Board will be to advise on the performance and affairs of the [Name of RAIO] and to give general directions on the implementation and achievement of the objectives and functions of the [Name of RAIO].
9. Without limiting the generality of Paragraph 8 of this Article the Board will:
  - a) review reports submitted to it by investigators-in-charge of the investigation of an aircraft accident or incident, prior to their submission to the State of Occurrence of the accident/incident;
  - b) consider all other reports submitted to it by the Chairman for review;
  - c) review safety recommendations resulting from the investigation of accidents and incidents and ensure their implementation by all Member States concerned or determine why implementation did not take place;

- d) review accident and incident investigation regulations drafted by the Office of the Chairman prior to their approval and adoption for use by the Member States;
- e) review accident and incident investigation guidance material and procedures drafted by the Office of the Chairman for use by the Member States and the Board;
- f) recommend to the Member States a suitable candidate to be appointed as the Chairman and review the qualifications and suitability of staff to be appointed by the Chairman and review their performance;
- g) review the annual programme of activities and budget estimates for the [Name of RAIO] for submission to the Member States for approval;
- h) review the annual report of the activities of the [Name of RAIO] for submission to the Member States; and
- i) exercise such other powers and perform such other functions as may be conferred on it by the Member States necessary for the proper implementation of this Agreement.

## **ARTICLE 9 Meetings of the Board**

1. The Board will meet at least once in every six calendar months and may hold extraordinary meetings as and when necessary, particularly to review and adopt accident and incident investigation reports and safety recommendations.
2. Meetings of the Board will be held at the Office of the Chairman or such other place as the Chairman may decide.
3. The quorum for any meeting of the Board will be a simple majority of the members of the Board.
4. Decisions of the Board will be by a simple majority vote by the members present and voting.
5. Subject to this Article, the Board will determine its own rules of procedure including the convening of meetings and for the conduct of business at the meetings and the recording of its decisions and minutes.

## **ARTICLE 10 Office of the Chairman**

1. The Headquarters of the [Name of RAIO] will be the Office of the Chairman which will be located in such Member State as the Member States may determine.
2. The Office of the Chairman will consist of the Chairman and any other staff as may be determined by the Board as being required to assist the Chairman in his/her functions.
3. All staff will be appointed by the Chairman on the terms and conditions proposed by the Board.
4. In the appointment of professional staff, consideration will first be given to suitably qualified and experienced candidates from the Member States prior to consideration being given to any other candidates.

**ARTICLE 11**  
**Relationship between the [Name of RAIO]**  
**and the Member States**

1. The [Name of RAIO] will at the end of each financial year prepare an annual report on the performance of its functions during that year for submission to the Member States.
2. Member States may give policy directions of a general nature to the [Name of RAIO] in respect of the performance of the functions of the [Name of RAIO], provided that such directions are consistent with the provisions of this Agreement.

**ARTICLE 12**  
**Role of Member States**

Member States will:

- a) implement safety recommendations received resulting from the investigation of accidents and incidents or state the reasons why such safety recommendations were not implemented;
- b) promulgate common regulations developed by the [Name of RAIO] in the area of accident and incident investigation that are compliant with the provisions of ICAO Annex 13 — *Aircraft Accident and Incident Investigation*;
- c) participate in activities of the [Name of RAIO] with the aim of assisting other Member States in the area of accident and incident investigation; and
- d) adopt and support measures and programmes for the training of accident and incident investigators and other technical staff in the [Name of RAIO].

**ARTICLE 13**  
**Financial Provisions of the [Name of RAIO]**

The funds of the [Name of RAIO] will consist of the following:

- a) contributions of the governments of Member States that cover the annual financial needs of the RAIO, as well as contingency emergency funds to cover the investigations that involve extraordinary costs;
- b) donations, grants or loans from sources approved by the Member States;
- c) revenue derived from the activities of the [Name of RAIO], to include conduct of investigations, training, consultancies and other services performed; and
- d) any other sources as may be approved by the Member States.

**ARTICLE 14**  
**Privileges and Immunities**

1. Member States will grant [Name of RAIO] the privileges and immunities necessary for the fulfilment of its objectives and the exercise of its functions.

2. In addition to the privileges and immunities to be accorded to [Name of RAIO], the [Name of RAIO] will enter into a complementary agreement relating to the privileges and immunities to be accorded to the [Name of RAIO] by the Member State in which the Office of the Chairman will be located.

**ARTICLE 15**  
**Settlement of Dispute**

In the event of a dispute between a Member State and the [Name of RAIO], the Member State concerned and/or the [Name of RAIO] will first seek solution by means of negotiation and conciliation before raising the issue with all Member States.

**ARTICLE 16**  
**Arbitration**

Where a Member State and/or the [Name of RAIO] fails to resolve a dispute the decision of the Member States will be binding.

**ARTICLE 17**  
**Entry into Force, Duration and Withdrawal**

1. This Agreement will enter into force immediately upon signature by a simple majority of Ministers responsible for accident and incident investigation within the Member States. Thereafter, it will come into force for other [Name of RAIO] Member States which subsequently sign this Agreement.

2. Any Party that elects to withdraw from the Agreement will forward a formal notification of the intent to withdraw to the Chairman of [Name of RAIO]. The withdrawal will take effect one year after the date of the receipt by the Chairman. The withdrawal will be without prejudice to any obligation incurred by the withdrawing Party under this Agreement prior to such withdrawal. This Agreement will continue to be in force thereafter with respect to the other Parties.

**ARTICLE 18**  
**Accession**

1. Any additional State, which wishes to become a party to this Agreement, may do so upon approval by Member States and upon signature to the Agreement.

2. In cases of accession, this Agreement will enter into force for the party acceding, thirty days after the date of signature.

**ARTICLE 19**  
**Dissolution**

1. The [Name of RAIO] may be dissolved by the Member States.
2. On dissolution, the rights, assets and liabilities of the [Name of RAIO] will revert to Member States.

**ARTICLE 20**  
**Amendment of the Agreement**

1. This Agreement may be amended by the agreement of Member States.
  2. Any Member State may submit proposals for the amendment of this Agreement.
  3. Any proposals for amendment will be submitted in writing to the Chairman who will, within thirty (30) days of its receipt, communicate the proposed amendment to Member States.
  4. Member States that wish to comment on the proposal will do so within ninety (90) days from the date of dispatch of the proposal by the Chairman.
  5. After expiration of the period prescribed under paragraph 4 of this Article, the Chairman will convene the Board to consider the proposals and any comments thereon received from Member States. The recommendations of the Board will be submitted to the Member States.
  6. Any amendment to this Agreement will be valid only when adopted by the Member States and will enter into force when signed by all Member States.
- .....

IN FAITH WHEREOF, the undersigned have appended their signatures here on this ..... day of ..... in the year two thousand and .....

| <b>State</b>    | <b>Name and title of Representative</b> | <b>Signature/date</b> |
|-----------------|---|-----------------------|
| [Name of State] |   |                       |

## Appendix 2

### INDIVIDUAL DEVELOPMENT PLAN

| INDIVIDUAL DEVELOPMENT PLAN — AIRCRAFT ACCIDENT INVESTIGATOR  |               |   |
|---|---------------|---|
| Knowledge, skills and experience  | Source/Course | Date (gained, demonstrated, or scheduled to gain) and Remarks (number of years, grades, etc.) |
| <i>General background</i>   |               |   |
| University degree   |               |   |
| Advanced degree(s)  |               |   |
| Other formal education  |               |   |
| Airline pilot (type ratings)  |               |   |
| Military pilot (type)   |               |   |
| Air traffic controller  |               |   |
| Engineer (specialty)  |               |   |
| Flight attendant  |               |   |
| Maintenance   |               |   |
| Meteorology   |               |   |
| Human performance   |               |   |
| Other   |               |   |
| Formal basic and advanced aircraft accident investigation courses attended and certificates held (before being hired) |               |   |
| <i>Administrative matters</i>   |               |   |
| Legislation and regulations   |               |   |
| International requirements (including Annex 13 and other ICAO documents)  |               |   |
| Memoranda of Understanding  |               |   |
| Liaison arrangements with local and national authorities  |               |   |
| Structure of the [Investigation Authority] and other [Name of State] aviation organizations                           |               |   |
| Aircraft accident investigation manuals   |               |   |
| Definitions and accident classification   |               |   |
| Equipment and tools   |               |   |

| <b>Knowledge, skills and experience</b>  | <b>Source/Course</b> | <b>Date (gained, demonstrated, or scheduled to gain) and Remarks</b> (number of years, grades, etc.) |
|--|----------------------|--|
| Transportation arrangements  |                      |  |
| Ethics and conduct   |                      |  |
| Financial management   |                      |  |
| <i>Initial response procedures</i>   |                      |  |
| On-call procedures   |                      |  |
| Notification of other national authorities and organizations                       |                      |  |
| Securing of records, recordings and samples  |                      |  |
| Accident site jurisdiction and security  |                      |  |
| Investigator safety — biological hazard training and equipment                     |                      |  |
| Investigator safety, including psychological stress familiarization                |                      |  |
| Recovery of human remains  |                      |  |
| Requests for autopsies   |                      |  |
| Family assistance  |                      |  |
| <i>Investigation procedures</i>  |                      |  |
| Authority and responsibilities   |                      |  |
| Size and scope of the investigation  |                      |  |
| Investigation management (Group Chairman and IIC) — on-scene domestic and overseas |                      |  |
| Use of specialists   |                      |  |
| Parties to the investigation, accredited representatives, advisers and observers   |                      |  |
| Dealing with news media  |                      |  |
| Specialty procedures (operations, engineering, human factors, etc.)                |                      |  |
| <i>Report writing</i>  |                      |  |
| Internal and external correspondence   |                      |  |
| Specialist field notes and factual reports   |                      |  |
| Specialist analysis report   |                      |  |
| Safety recommendations   |                      |  |
| Final reports  |                      |  |
| Technical papers   |                      |  |
| Speeches   |                      |  |
| <i>Seminar and meeting attendance</i>  |                      |  |
| ISASI (Member?)  |                      |  |
| Flight Safety Foundation   |                      |  |
| Seminars related to technical specialty  |                      |  |

| <b>Knowledge, skills and experience</b>  | <b>Source/Course</b> | <b>Date (gained, demonstrated, or scheduled to gain) and Remarks (number of years, grades, etc.)</b> |
|--|----------------------|--|
| ICAO working groups  |                      |  |
| Regional working groups  |                      |  |
| Other  |                      |  |
| <b>Basic, advanced, or specialty courses attended and certificates<br/>(after being hired)</b> |                      |  |
| <b>Name of course or institution</b>   | <b>Dates</b>         | <b>Remarks (Certificates, etc.)</b>  |
|  |                      |  |
|  |                      |  |
| <b>On-the-job-training (minimum of 2 cases)</b>  |                      |  |
| <b>Identification of accidents</b>   | <b>Dates</b>         | <b>Remarks</b>   |
| OJT — domestic accident  |                      |  |
| OJT — domestic accident  |                      |  |
|  |                      |  |
| <b>Participation as an observer (OJT)<br/>at investigations conducted by other States</b>      |                      |  |
| <b>Identification of accidents</b>   | <b>Dates</b>         | <b>Remarks</b>   |
|  |                      |  |
|  |                      |  |
| <b>Recurrent training</b>  |                      |  |
| <b>Name of course or institution</b>   | <b>Dates</b>         | <b>Remarks (Certificates, etc.)</b>  |
|  |                      |  |
|  |                      |  |

**— END —**





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